Appendix A

Example Iowa Self Assessment Program Report Output

Iowa Self Assessment Program for Municipal Wastewater Treatment Plants

Year: 1994
Treatment Plant: New Jack City ID#: 007
Location (City): City of New City
Type of Treatment: Activated Sludge
Population Equivalent: 45000

Self Assessment Score (points): 214
Color Rating of Score (Green, Yellow, Red): Yellow

Comparison of your Self Assessment Score and Color Rating to other Iowa majors(> 1mgd flow)

70% of Iowa majors had a lower (better) score and 30% had a higher score. Approximately 50% of the majors had a Green color rating (<100 points), approximately 30% had a Yellow rating (100-300 points) and approximately 20% had a Red rating (>300 points). (Based on Self Assessment Scores for Iowa majors from 1990-1994).

Although no scoring and rating system can precisely account for all situations, a green score generally means acceptable operation, yellow generally indicates some modifications in operation or upgrading may be needed to reduce pollution incidents, and red generally means significant pollution problems are evident and it is likely that upgrades are necessary for acceptable performance. Probably more important than the score for a single year is the trend in score over the last five years, which can be found using the Graphics command in the Yearly Compliance Assessment menu.

To help in identifying the most important areas of possible concern for pollution prevention, the following tables rank design capacity and permit violations in decreasing order of importance, by self assessment score (Table 1.), technical review criteria violations (Table 2.), and permit limit violations (Table 3.). A graphical ranking of current year parameters by score can be produced using the Graphics Command in the Yearly Compliance Assessment Menu. The trend with time of critical parameters can be examined using the Linear Regression command in the Monthly Discharge Monitoring Records menu.

New Jack City
1994

Table 1. Ranking of design capacity and permit limits by decreasing self assessment score.

parameter	No. of Violaitons for Three Limit Types 0.85-Limit	1-Limit	TRC-Limit	Score
Effluent NH3-N, MM (mg/l)	5	5	5	85
Effluent NH3-N, MM (lb/d)	5	5	5	85
Effluent Cu, MA (mg/l)	5	2	1	30
Effluent Flow, MM (MGD)	2	0	0	4
Effluent Cu, MA (lb/d)	2	0	0	4
Effluent NH3-N, MA (mg/l)	1	0	0	2
Effluent Cu, MM (mg/l)	1	0	0	2
Effluent Cu, MM (lb/d)	1	0	0	2
Influent CBOD, MA (lb/d)	0	0	0	0
Effluent Flow, MA (MGD)	0	0	0	0
Effluent CBOD, MA (mg/l)	0	0	0	0
Effluent CBOD, 7M (mg/l)	0	0	0	0
Effluent CBOD, MA (lb/d)	0	0	0	0
Effluent CBOD, 7M (lb/d)	0	0	0	0
Effluent TSS, MA (mg/l)	0	0	0	0
Effluent TSS, 7M (mg/l)	0	0	0	0
Effluent TSS, MA (lb/d)	0	0	0	0
Effluent TSS, 7M (lb/d)	0	0	0	0
Effluent NH3-N, MA (lb/d)	0	0	0	0
Effluent pH, Monthly Minimum	0	0	0	0
Effluent pH, Monthly Maximum	0	0	0	0
Effluent Hg, MA (mg/l)	0	0	0	0
Effluent Hg, MM (mg/l)	0	0	0	0
Effluent Hg, MA (lb/d)	0	0	0	0
Effluent Hg, MM (lb/d)	0	0	0	0
Effluent Zn, MA (mg/l)	0	0	0	0
Effluent Zn, MM (mg/l)	0	0	0	0
Effluent Zn, MA (lb/d)	0	0	0	0
Effluent Zn, MM (lb/d)	0	0	0	0

New Jack City

1994

Table 1. Ranking of design capacity and permit limits by decreasing self assessment score (continued).

parameter	No. of Violaitons for Three Limit Types 0.85-Limit	1-Limit	TRC-Limit	Score
Effluent Pb, MA (mg/l)	0	0	0	0
Effluent Pb, MM (mg/l)	0	0	0	0
Effluent Pb, MA (lb/d)	0	0	0	0
Effluent Pb, MM (lb/d)	0	0	0	0
Effluent Cr(+6), MA (mg/l)	0	0	0	0
Effluent Cr(+6), MM (mg/l)	0	0	0	0
Effluent Cr(+6), MA (lb/d)	0	0	0	0
Effluent Cr(+6), MM (lb/d)	0	0	0	0
Effluent Cn(total), MA (mg/l)	0	0	0	0
Effluent Cn(total), MM (mg/l)	0	0	0	0
Effluent Cn(total), MA (lb/d)	0	0	0	0
Effluent Cn(total), MM (lb/d)	0	0	0	0
Total # of over Limits	22	12	11	

Total Score = 214 (Yellow Zone)

*0.85-Limit: 85% of the limit (or design capacity). Applied to all parameters except pH.
The 85%-Limit of pH Maximum is 8.775 and that of pH Minimum is 6.225.

**TRC-Limit: Technical Review Criteria factor times the limit (or design capacity).
Flow Rate: No TRC-Limit
pH: No TRC-Limit
Fecal Coliform: No TRC-Limit
CBOD: 1.4 times Limit
TSS: 1.4 times Limit
NH3-N: 1.2 times Limit
Total Residual Chlorine: 1.2 times Limit
Metal: 1.2 times Limit

New Jack City
1994

Table 2. Ranking of design capacity and permit limits by decreasing number of technical review criteria violations.

	No. of Violaitons for Three Limit Types			
parameter	0.85-Limit	1-Limit	TRC-Limit	Score
Effluent NH3-N, MM (mg/l)	5	5	5	85
Effluent NH3-N, MM (lb/d)	5	5	5	85
Effluent Cu, MA (mg/l)	5	2	1	30
Influent CBOD, MA (lb/d)	0	0	0	0
Effluent Flow, MA (MGD)	0	0	0	0
Effluent Flow, MM (MGD)	2	0	0	4
Effluent CBOD, MA (mg/l)	0	0	0	0
Effluent CBOD, 7M (mg/l)	0	0	0	0
Effluent CBOD, MA (lb/d)	0	0	0	0
Effluent CBOD, 7M (lb/d)	0	0	0	0
Effluent TSS, MA (mg/l)	0	0	0	0
Effluent TSS, 7M (mg/l)	0	0	0	0
Effluent TSS, MA (lb/d)	0	0	0	0
Effluent TSS, 7M (lb/d)	0	0	0	0
Effluent NH3-N, MA (mg/l)	1	0	0	2
Effluent NH3-N, MA (lb/d)	0	0	0	0
Effluent pH, Monthly Minimum	0	0	0	0
Effluent pH, Monthly Maximum	0	0	0	0
Effluent Hg, MA (mg/l)	0	0	0	0
Effluent Hg, MM (mg/l)	0	0	0	0
Effluent Hg, MA (lb/d)	0	0	0	0
Effluent Hg, MM (lb/d)	0	0	0	0
Effluent Zn, MA (mg/l)	0	0	0	0
Effluent Zn, MM (mg/l)	0	0	0	0
Effluent Zn, MA (lb/d)	0	0	0	0
Effluent Zn, MM (lb/d)	0	0	0	0
Effluent Pb, MA (mg/l)	0	0	0	0
Effluent Pb, MM (mg/l)	0	0	0	0
Effluent Pb, MA (lb/d)	0	0	0	0

New Jack City

1994

Table 2. Ranking of design capacity and permit limits by decreasing number of technical review criteria violations (continued).

	No. of Violaitons for Three Limit Types			
parameter	0.85-Limit	1-Limit	TRC-Limit	Score
Effluent Pb, MM (lb/d)	0	0	0	0
Effluent Cu, MM (mg/l)	1	0	0	2
Effluent Cu, MA (lb/d)	2	0	0	4
Effluent Cu, MM (lb/d)	1	0	0	2
Effluent Cr(+6), MA (mg/l)	0	0	0	0
Effluent Cr(+6), MM (mg/l)	0	0	0	0
Effluent Cr(+6), MA (lb/d)	0	0	0	0
Effluent Cr(+6), MM (lb/d)	0	0	0	0
Effluent Cn(total), MA (mg/l)	0	0	0	0
Effluent Cn(total), MM (mg/l)	0	0	0	0
Effluent Cn(total), MA (lb/d)	0	0	0	0
Effluent Cn(total), MM (lb/d)	0	0	0	0
Total # of over Limits	22	12	11	

Total Score = 214 (Yellow Zone)

*0.85-Limit: 85% of the limit (or design capacity). Applied to all parameters except pH.
The 85%-Limit of pH Maximum is 8.775 and that of pH Minimum is 6.225.

**TRC-Limit: Technical Review Criteria factor times the limit (or design capacity).
Flow Rate: No TRC-Limit
pH: No TRC-Limit
Fecal Coliform: No TRC-Limit
CBOD: 1.4 times Limit
TSS: 1.4 times Limit
NH3-N: 1.2 times Limit
Total Residual Chlorine: 1.2 times Limit
Metal: 1.2 times Limit

New Jack City

1994

Table 3. Ranking of design capacity and permit limits by decreasing number of permit limit violatio

parameter	No. of Violaitons for Three Limit Types: 0.85-Limit	1-Limit	TRC-Limit	Score
Effluent NH3-N, MM (mg/l)	5	5	5	85
Effluent NH3-N, MM (lb/d)	5	5	5	85
Effluent Cu, MA (mg/l)	5	2	1	30
Influent CBOD, MA (lb/d)	0	0	0	0
Effluent Flow, MA (MGD)	0	0	0	0
Effluent Flow, MM (MGD)	2	0	0	4
Effluent CBOD, MA (mg/l)	0	0	0	0
Effluent CBOD, 7M (mg/l)	0	0	0	0
Effluent CBOD, MA (lb/d)	0	0	0	0
Effluent CBOD, 7M (lb/d)	0	0	0	0
Effluent TSS, MA (mg/l)	0	0	0	0
Effluent TSS, 7M (mg/l)	0	0	0	0
Effluent TSS, MA (lb/d)	0	0	0	0
Effluent TSS, 7M (lb/d)	0	0	0	0
Effluent NH3-N, MA (mg/l)	1	0	0	2
Effluent NH3-N, MA (lb/d)	0	0	0	0
Effluent pH, Monthly Minimum	0	0	0	0
Effluent pH, Monthly Maximum	0	0	0	0
Effluent Hg, MA (mg/l)	0	0	0	0
Effluent Hg, MM (mg/l)	0	0	0	0
Effluent Hg, MA (lb/d)	0	0	0	0
Effluent Hg, MM (lb/d)	0	0	0	0
Effluent Zn, MA (mg/l)	0	0	0	0
Effluent Zn, MM (mg/l)	0	0	0	0
Effluent Zn, MA (lb/d)	0	0	0	0
Effluent Zn, MM (lb/d)	0	0	0	0
Effluent Pb, MA (mg/l)	0	0	0	0
Effluent Pb, MM (mg/l)	0	0	0	0
Effluent Pb, MA (lb/d)	0	0	0	0

New Jack City

1994

Table 3. Ranking of design capacity and permit limits by decreasing number of permit limit violations (continued).

	No. of Violaitons for Three Limit Types			
parameter	0.85-Limit	1-Limit	TRC-Limit	Score
Effluent Pb, MM (lb/d)	0	0	0	0
Effluent Cu, MM (mg/l)	1	0	0	2
Effluent Cu, MA (lb/d)	2	0	0	4
Effluent Cu, MM (lb/d)	1	0	0	2
Effluent Cr(+6), MA (mg/l)	0	0	0	0
Effluent Cr(+6), MM (mg/l)	0	0	0	0
Effluent Cr(+6), MA (lb/d)	0	0	0	0
Effluent Cr(+6), MM (lb/d)	0	0	0	0
Effluent Cn(total), MA (mg/l)	0	0	0	0
Effluent Cn(total), MM (mg/l)	0	0	0	0
Effluent Cn(total), MA (lb/d)	0	0	0	0
Effluent Cn(total), MM (lb/d)	0	0	0	0
Total # of over Limits	22	12	11	

Total Score = 214 (Yellow Zone)

*0.85-Limit: 85% of the limit (or design capacity). Applied to all parameters except pH..
The 85%-Limit of pH Maximum is 8.775 and that of pH Minimum is 6.225.

**TRC-Limit: Technical Review Criteria factor times the limit (or design capacity).
Flow Rate: No TRC-Limit
pH: No TRC-Limit
Fecal Coliform: No TRC-Limit
CBOD: 1.4 times Limit
TSS: 1.4 times Limit
NH3-N: 1.2 times Limit
Total Residual Chlorine: 1.2 times Limit
Metal: 1.2 times Limit

New Jack City
1994

Effluent NH3-N, MM (mg/l), 85

Effluent NH3-N, MM (lb/d), 85

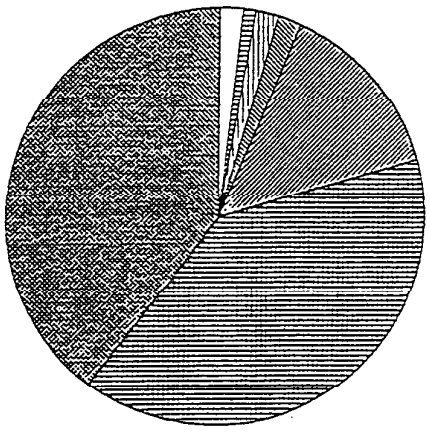
Effluent Cu, MA (mg/l), 30

Effluent Flow, MM (MGD), 4

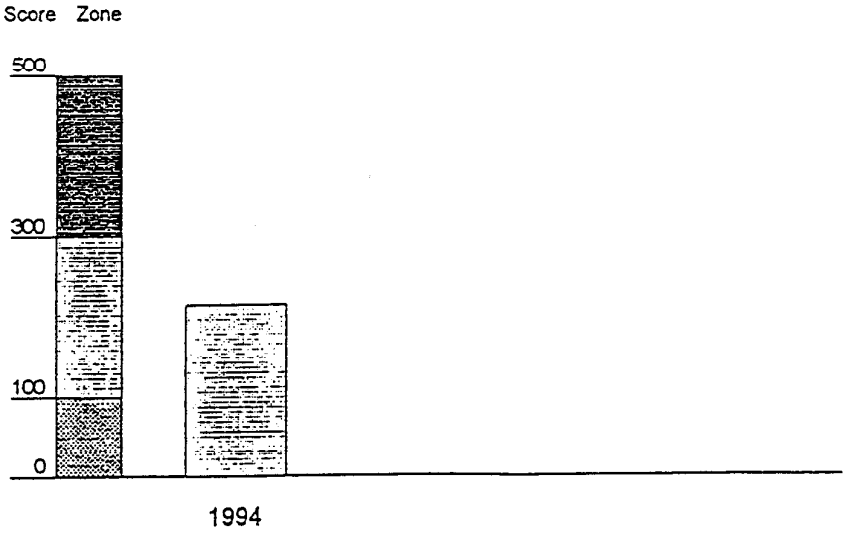
Effluent Cu, MA (lb/d), 4

Effluent NH3-N, MA (mg/l), 2

Other Parameters, 4

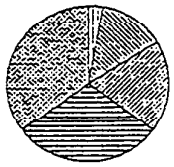


Total Score = 214 (Yellow Zone)



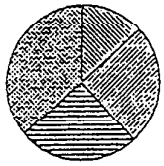
New Jack City
1990 - 1994

- Effluent TSS, MM (lb/d), 26
- Effluent Flow, MA (MGD), 22
- Effluent TSS, MM (mg/l), 14
- Effluent pH, Monthly Maximum, 10
- Effluent CBOD, MM (mg/l), 2



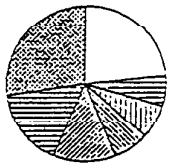
Total score = 74 (1990)

- Effluent TSS, MM (mg/l), 38
- Effluent Flow, MA (MGD), 27
- Effluent TSS, MM (lb/d), 26
- Effluent pH, Monthly Maximum, 14



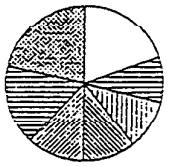
Total score = 105 (1991)

- Effluent Cu, MA (mg/l), 35
- Effluent Cu, MM (mg/l), 21
- Effluent pH, Monthly Maximum, 16
- Effluent Flow, MM (MGD), 9
- Effluent TSS, MM (mg/l), 9
- Effluent Flow, MA (MGD), 8
- Other Parameters, 30



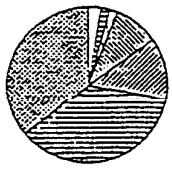
Total score = 128 (1992)

- Effluent Flow, MA (MGD), 42
- Effluent Flow, MM (MGD), 32
- Effluent NH3-N, MM (lb/d), 23
- Effluent NH3-N, MM (mg/l), 21
- Effluent TSS, 7M (lb/d), 20
- Effluent pH, Monthly Maximum, 18
- Other Parameters, 38

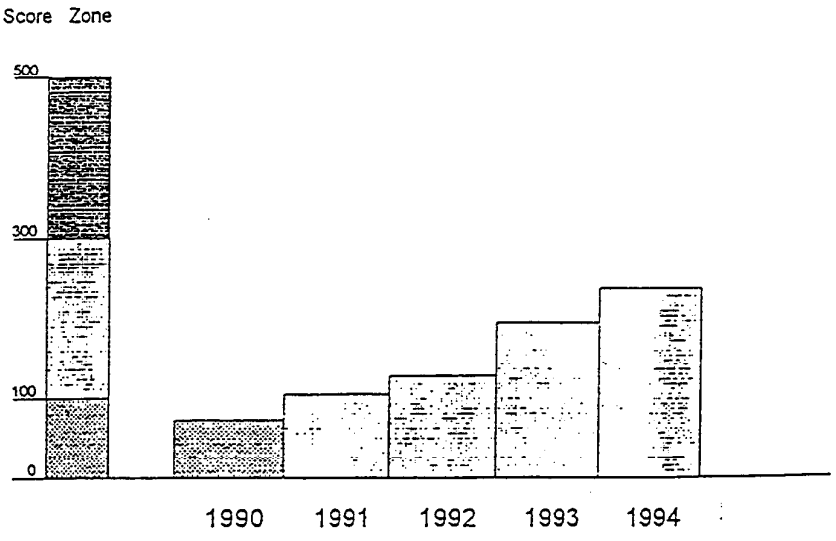


Total score = 194 (1993)

- Effluent NH3-N, MM (mg/l), 85
- Effluent NH3-N, MM (lb/d), 85
- Effluent Cu, MA (mg/l), 30
- Effluent pH, Monthly Maximum, 22
- Effluent Flow, MM (MGD), 4
- Effluent Cu, MA (lb/d), 4
- Other Parameters, 6



Total score = 236 (1994)



New Jack City

1994

Discharge Monitoring Records with Limits (or Capacities)

Influent CBOD, MA (lb/d)

Month	1	2	3	4	5	6	7	8	9	10	11	12
DMR												
Capacity	13264	13264	13264	13264	13264	13264	13264	13264	13264	13264	13264	13264

Effluent Flow, MA (MGD)

Month	1	2	3	4	5	6	7	8	9	10	11	12
DMR	5.542	6.902	7.03	6.18	7.094	6.559	6.097	5.98	5.695	5.186	6.31	5.722
Limit	9	9	9	9	9	9	9	9	9	9	9	9

Effluent Flow, MM (MGD)

Month	1	2	3	4	5	6	7	8	9	10	11	12
DMR	6.152	13.799	9.549	9.01	9.594	14.509	8.635	8.696	10.711	8.85	8.299	6.717
Limit	15	15	15	15	15	15	15	15	15	15	15	15

Effluent CBOD, MA (mg/l)

Month	1	2	3	4	5	6	7	8	9	10	11	12
DMR	5	6	10	6	4	4	4	4	3	4	4	2
Limit	25	25	25	25	25	25	25	25	25	25	25	25

Effluent CBOD, 7M (mg/l)

Month	1	2	3	4	5	6	7	8	9	10	11	12
DMR	6	10	14	8	5	6	7	4	3	5	6	2
Limit	40	40	40	40	40	40	40	40	40	40	40	40

Effluent CBOD, MA (lb/d)

Month	1	2	3	4	5	6	7	8	9	10	11	12
DMR	244	292	565	293	267	235	226	187	119	185	205	92
Limit	1876	1876	1876	1876	1876	1876	1876	1876	1876	1876	1876	1876

Effluent CBOD, 7M (lb/d)

Month	1	2	3	4	5	6	7	8	9	10	11	12
DMR	264	577	792	398	362	462	462	228	129	209	319	103
Limit	3002	3002	3002	3002	3002	3002	3002	3002	3002	3002	3002	3002

New Jack City

1994

Discharge Monitoring Records with Limits (or Capacities)

Effluent TSS, MA (mg/l)

Month	1	2	3	4	5	6	7	8	9	10	11	12
DMR	9	12	13	5	7	5	9	5	3	5	8	4
Limit	30	30	30	30	30	30	30	30	30	30	30	30

Effluent TSS, 7M (mg/l)

Month	1	2	3	4	5	6	7	8	9	10	11	12
DMR	12	19	16	7	16	8	18	10	3	14	14	7
Limit	45	45	45	45	45	45	45	45	45	45	45	45

Effluent TSS, MA (lb/d)

Month	1	2	3	4	5	6	7	8	9	10	11	12
DMR	397	696	750	261	381	270	534	261	127	231	460	210
Limit	2252	2252	2252	2252	2252	2252	2252	2252	2252	2252	2252	2252

Effluent TSS, 7M (lb/d)

Month	1	2	3	4	5	6	7	8	9	10	11	12
DMR	555	1129	919	368	860	506	1135	473	171	545	920	321
Limit	3378	3378	3378	3378	3378	3378	3378	3378	3378	3378	3378	3378

Effluent NH3-N, MA (mg/l)

Month	1	2	3	4	5	6	7	8	9	10	11	12
DMR		.1	3.8	.5	.01	2	2.2	.5		.8	3.3	.9
Limit	8.5	8.5	5	5	5	5	2.3	2.3	5	5	5	5

Effluent NH3-N, MM (mg/l)

Month	1	2	3	4	5	6	7	8	9	10	11	12
DMR		1.4	20.3	1.9	.5	11	13.7	10.2		3.9	14	3.9
Limit	14	14	8.4	8.4	8.4	8.4	3.9	3.9	8.4	8.4	8.4	8.4

Effluent NH3-N, MA (lb/d)

Month	1	2	3	4	5	6	7	8	9	10	11	12
DMR		6	223	27	2	87	112	22		31	169	46
Limit	537	537	312	312	312	312	147	147	312	312	312	312

New Jack City

1994

Discharge Monitoring Records with Limits (or Capacities)

Effluent NH3-N, MM (lb/d)

Month	1	2	3	4	5	6	7	8	9	10	11	12
DMR		111	1196	141	28	798	713	464		153	683	192
Limit	898	898	522	522	522	522	245	245	522	522	522	522

Effluent pH, Monthly Minimum

Month	1	2	3	4	5	6	7	8	9	10	11	12
DMR	7	7	6.9	7.3	7.3	7.1	7.2	7.3	7.2	7.2	7.5	7
Limit	6	6	6	6	6	6	6	6	6	6	6	6

Effluent pH, Monthly Maximum

Month	1	2	3	4	5	6	7	8	9	10	11	12
DMR	7.7	7.5	7.9	7.8	7.8	7.9	7.8	7.9	7.9	8.1	8.2	7.9
Limit	9	9	9	9	9	9	9	9	9	9	9	9

Effluent Hg, MA (mg/l)

Month	1	2	3	4	5	6	7	8	9	10	11	12
DMR												
Limit	.19	.19	.19	.19	.19	.19	.19	.19	.19	.19	.19	.19

Effluent Hg, MM (mg/l)

Month	1	2	3	4	5	6	7	8	9	10	11	12
DMR												
Limit	.31	.31	.31	.31	.31	.31	.31	.31	.31	.31	.31	.31

Effluent Hg, MA (lb/d)

Month	1	2	3	4	5	6	7	8	9	10	11	12
DMR												
Limit	12	12	12	12	12	12	12	12	12	12	12	12

Effluent Hg, MM (lb/d)

Month	1	2	3	4	5	6	7	8	9	10	11	12
DMR												
Limit	19	19	19	19	19	19	19	19	19	19	19	19

New Jack City

1994

Discharge Monitoring Records with Limits (or Capacities)

Effluent Zn, MA (mg/l)

Month	1	2	3	4	5	6	7	8	9	10	11	12
DMR	.212	.227	.191	.04	.043	.03		.1	.01	.038	.015	.038
Limit	.47	.47	.47	.47	.47	.47	.47	.47	.47	.47	.47	.47

Effluent Zn, MM (mg/l)

Month	1	2	3	4	5	6	7	8	9	10	11	12
DMR	.367	.323	.416	.04	.06	.04		.36	.03	.15	.06	.06
Limit	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7

Effluent Zn, MA (lb/d)

Month	1	2	3	4	5	6	7	8	9	10	11	12
DMR	9.64	13.02	10.74	1.91	2.46	1.41		4.37	1.06	3.94	.76	2.44
Limit	33	33	33	33	33	33	33	33	33	33	33	33

Effluent Zn, MM (lb/d)

Month	1	2	3	4	5	6	7	8	9	10	11	12
DMR	15.93	18.87	20.89	1.91	3.5	1.77		15.2	1.24	6.27	3.04	2.71
Limit	50	50	50	50	50	50	50	50	50	50	50	50

Effluent Pb, MA.(mg/l)

Month	1	2	3	4	5	6	7	8	9	10	11	12
DMR	.042	.04	.028									
Limit	.11	.11	.11	.11	.11	.11	.11	.11	.11	.11	.11	.11

Effluent Pb, MM (mg/l)

Month	1	2	3	4	5	6	7	8	9	10	11	12
DMR	.06	.05	.06									
Limit	.18	.18	.18	.18	.18	.18	.18	.18	.18	.18	.18	.18

Effluent Pb, MA (lb/d)

Month	1	2	3	4	5	6	7	8	9	10	11	12
DMR	1.93	2.36	1.61									
Limit	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8

New Jack City

1994

Discharge Monitoring Records with Limits (or Capacities)

Effluent Pb, MM (lb/d)

Month	1	2	3	4	5	6	7	8	9	10	11	12
DMR	2.72	3.63	3.01									
Limit	11	11	11	11	11	11	11	11	11	11	11	11

Effluent Cu, MA (mg/l)

Month	1	2	3	4	5	6	7	8	9	10	11	12
DMR	.043	.028	.031		.05		.05		.04	.054	.058	.07
Limit	.055	.055	.055	.055	.055	.055	.055	.055	.055	.055	.055	.055

Effluent Cu, MM (mg/l)

Month	1	2	3	4	5	6	7	8	9	10	11	12
DMR	.059	.037	.059		.06		.06		.06	.08	.07	.07
Limit	.083	.083	.083	.083	.083	.083	.083	.083	.083	.083	.083	.083

Effluent Cu, MA (lb/d)

Month	1	2	3	4	5	6	7	8	9	10	11	12
DMR	1.99	1.6	1.77		3.3		2.12		2.61	3.57	3.37	3.42
Limit	4	4	4	4	4	4	4	4	4	4	4	4

Effluent Cu, MM (lb/d)

Month	1	2	3	4	5	6	7	8	9	10	11	12
DMR	2.79	2.03	2.96		4.56		2.89		2.89	5.17	3.95	3.92
Limit	6	6	6	6	6	6	6	6	6	6	6	6

Effluent Cr(+6), MA (mg/l)

Month	1	2	3	4	5	6	7	8	9	10	11	12
DMR												
Limit	.056	.056	.056	.056	.056	.056	.056	.056	.056	.056	.056	.056

Effluent Cr(+6), MM (mg/l)

Month	1	2	3	4	5	6	7	8	9	10	11	12
DMR												
Limit	.085	.085	.085	.085	.085	.085	.085	.085	.085	.085	.085	.085

New Jack City

1994

Discharge Monitoring Records with Limits (or Capacities)

Effluent Cr(+6), MA (lb/d)

Month	1	2	3	4	5	6	7	8	9	10	11	12
DMR Limit	4	4	4	4	4	4	4	4	4	4	4	4

Effluent Cr(+6), MM (lb/d)

Month	1	2	3	4	5	6	7	8	9	10	11	12
DMR Limit	6	6	6	6	6	6	6	6	6	6	6	6

Effluent Cn(total), MA (mg/l)

Month	1	2	3	4	5	6	7	8	9	10	11	12
DMR Limit	.037	.037	.037	.037	.037	.037	.037	.037	.037	.037	.037	.037

Effluent Cn(total), MM (mg/l)

Month	1	2	3	4	5	6	7	8	9	10	11	12
DMR Limit	.055	.055	.055	.055	.055	.055	.055	.055	.055	.055	.055	.055

Effluent Cn(total), MA (lb/d)

Month	1	2	3	4	5	6	7	8	9	10	11	12
DMR Limit	203	203	203	203	203	203	203	203	203	203	203	203

Effluent Cn(total), MM (lb/d)

Month	1	2	3	4	5	6	7	8	9	10	11	12
DMR Limit	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4

Financial Status and Costs Analysis

New Jack City (1994)

INCOME ($)		EXPENSES ($)			
			Budgetted	Actual	%
Basic user sewer fee	27000				
Sewer surcharges	26800	Administrative	8500	7500	11
Interest	2800	Operations & Maintenance			
Loans	8500	Personnel	18000	16800	6
Allocated tax funds	5600	Utilities	5600	5500	1
		Chemicals	6000	5800	3
		Equipment/Materials	4800	4700	2
Total income	70700	Contractual costs	4600	4300	6
		Others	3500	2500	28
		Debt Service	6000	5400	10
		Capital Improvement	2800	2500	10
		Total Expenses	59800	55000	8

TOTAL INCOME - TOTAL EXPENSES ($) = 15700

*% = (Budgeted - Actual)/Budgeted x 100

Operation and Maintenance Cost Analysis

New Jack City (1994)

The following is intended for comparison purposes only, and as a possible guide for evaluating your system's finances.

Major Component Costs as a percentage of Total O & M Costs

Components	Trickling filter	Activated sludge	Your Plant
Personnel	55-57%	41-49%	42%
Utilities	13-28%	26%	14%
Chemicals	8-12%	6-19%	15%
Equipment/Materials	9-12%	8-11%	12%
Contractual/Others	7-9%	7%	17%

From Table 3.6, (Operation and Maintenance costs for Municipal Wastewater Facilities, EPA Technical Report 430/9-81-004 FRD-22)

Administration Cost Analysis

New Jack City (1994)

The following is intended for comparison purposes only, and as a possible guide for evaluating your system's finances.

Annual Administrative Cost / Annual Total O & M costs (From Personnel, Utilities, Chemicals, Equipment/Materials, Maintenance and Contractual Costs and Others)

Design Flow (mgd)	Comparison of Annual administrative costs to annual total O&M costs	Your Plant
D.F.<= 1	7-10%	
1 <D.F.<= 5	7-8%	
5 <D.F.<= 10	6-7%	18%
10 <D.F.<= 25	6-7%	
25 <D.F.<= 50	5-6%	
50 <D.F.<= 100	5-6%	

From Table 3.1, (Operation and Maintenance costs for Municipal Wastewater Facilities, EPA Technical Report 430/9-81-004 FRD-22)

Treatment Cost Analysis

New Jack City (1994)

If you do not have the Engineering News Record (ENR) - ignore the third line. It is intended as a way to update the costs given in Table 3.10 to the current year.

Annual Average Loading Status : 68.8% (Underloaded)
Total Annual O & M costs / Million Gallons (average flow) : 572
ENR Construction Cost Index for Current Year :

	Total Annual O&M Costs/Million Gallons (Dollars/MG) *(Based on 1981 Cost Index)*			
Treatment Level	Underloaded	Design Loaded	Overloaded	Your Plant
Secondary	262	305	317	
Advanced Secondary	251	272	285	
Advanced WW Treatment	322	305	175	

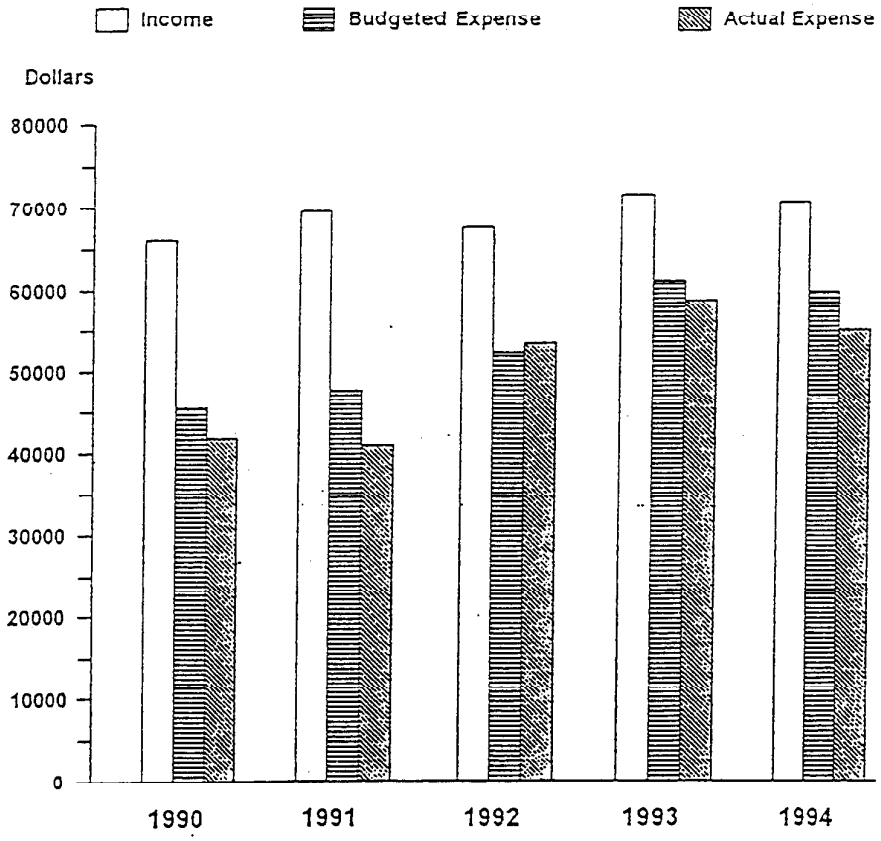
From Table 3.10, (Operation and Maintenance costs for Municipal Wastewater Facilities, EPA Technical Report 430/9-81-004 FRD-22)
ENR Construction Cost Index for 1981 is 3535

Financial Status

New Jack City (1994)

Five-Year Trend

Year	Income	Budgeted Expense	Actual Expense
1990	66000	45500	41800
1991	69500	47600	40900
1992	67600	52250	53400
1993	71600	61100	58700
1994	70700	59800	55000



Staffing

New Jack City (1994)

1. Provide information on personnel employed by your wastewater treatment plant.

	Name	Title	Years on Staff	Certification Level	C.L. Date
1)	Tim Smith	Plant Operator	16	Professional Engineer	1994

2. Certification Level for all responsible person(s) in charge meet or exceed required Level.
Answer: Yes , *If no, please explain.*

3. Is there an operator's training and continuing education program?
Answer: Yes , *If yes, please describe the program.*

4. Is there a dedicated budget line item for operator's training?
Answer: Yes , *If yes, please answer the following question.*

5. Are there sufficient funds to provide each employee with the minimum hours of training required for recertification or upgr
Answer: Yes

Maintenance

New Jack City (1994)

1. Does your treatment system have a written operation and maintenance program including a preventive maintenance program on major equipment and the sewer collection system?
Treatment Plant: No , *Collection system: No*
If yes, please describe programs briefly. If no, please describe any plans to incorporated O & M program.

2. Are proper records maintained for preventive maintenance tasks, as well as equipment problems.
Treatment Plant: No , *Collection system: No*

3. Do you have an inventory of spare parts and preventive maintenance supplies at your plant?
Answer: Yes

4. For the last year, provide a list of major repairs or mechanical equipment replacement. Do not include major treatment plant construction or upgrading program.

Collection System

New Jack City (1994)

1. Is the collection system inspected on a regular basis?
Answer: Once every 6 months

2. List the number of bypasses, overflows that were due to Excessive Flows within the collection system and the treatment plant.
Treatment Plant: 8 , *Collection system: 11*

3. List the number of bypasses or overflows that were Due to Equipment Failure either at the treatment plant or Due to Pumping Problem in the collection system.
Treatment Plant: 13 , *Collection system: 10*

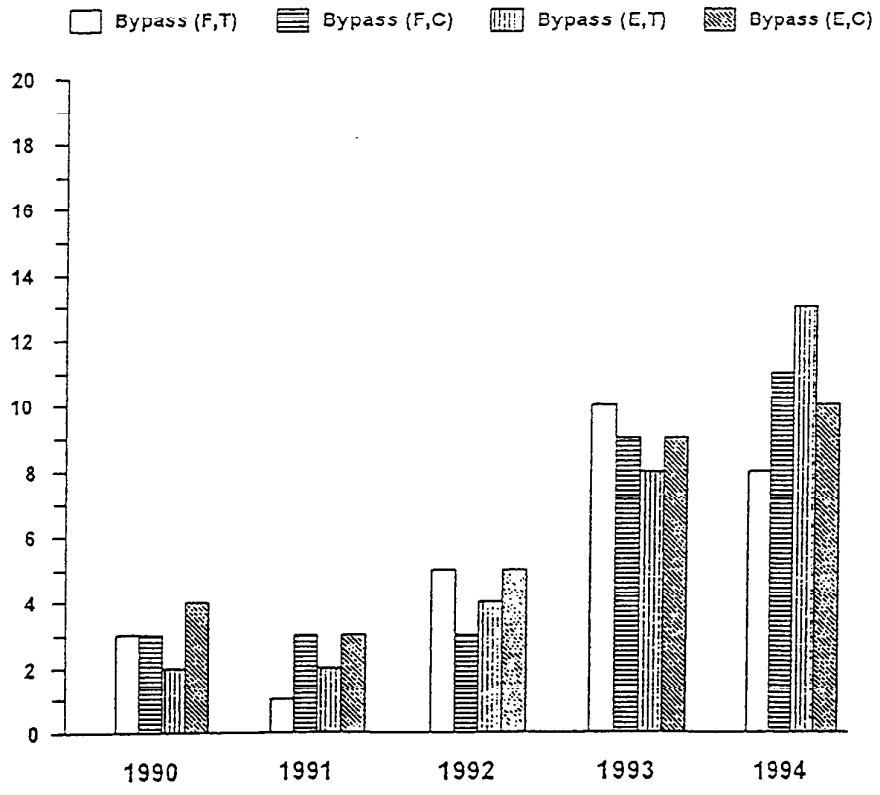
Collection System

New Jack City (1994)

Five-Year Trend

Year	Bypass (F,T)	Bypass (F,C)	Bypass (E,T)	Bypass (E,C)
1990	3	3	2	4
1991	1	3	2	3
1992	5	3	4	5
1993	10	9	8	9
1994	8	11	13	10

Bypass (F,T): # of bypasses or overflows due to excessive flows in treatmen plant.
Bypass (F,C): # of bypasses or overflows due to excessive flows in collection system.
Bypass (E,T): # of bypasses or overflows due to equipment failure in treatmen plant.
Bypass (E,C): # of bypasses or overflows due to pumping problem in collection system.



New Development and Planning

New Jack City (1994)

1. What was the percent increase or decrease in last year's population?
Answer: 7 %

2. How many feet of sewer lines were installed last year?
Answer: 2300 feet

3. Has expanded industrial (or other development) production in the last year lead to significant increases in flow or pollutant loading (5% or greater) to the treatment plant. Please describe it (them) in the following box.

4. List any new pollutants.

New Development and Planning

New Jack City (1994)

Five-Year Trend

Year	% of Population Change	Feet of sewer lines installed
1990	6	1200
1991	5	1000
1992	6.5	1300
1993	7	1500
1994	7	2300